Phases							2nd	3rd	Environmental Management
Ph1	Ph2	Ph3	Ph4	Ph5	Ph6	Ph8	Lvl	Lvl	
Assess.	Studies	Design	Cap. Const.	O&M	SLMT	Prog. Mgmt/ Infra.			ENVIRONMENTAL COST ELEMENT STRUCTURE
						8	**.01**	**.00**	**PROGRAM MANAGEMENT, SUPPORT & INFRASTRUCTURE (OPTIONAL)**
						8	.01	.01	Personnel Resources
						8	.01	.02	Program Support
						8	.01	.03	Program Infrastructure
						8	.01	.04	Government - Personnel Resources
						8	.01	.05	Government - Program Support
						8	.01	.06	Government - Program Infrastructure
						8	.01	.9x	Other
1	**2**	**3**	**4**	**5**	**6**	**8**	**.02**	**.00**	**PROJECT MANAGEMENT & SUPPORT (Operable Unit/Solid Waste Management Unit)**
1	2	3	4	5	6		.02	.01	Project Management/Support/Administration
1	2	3	4	5	6		.02	.02	Community Relations
1	2	3	4	5	6		.02	.03	Regulatory Interaction
1	2	3	4	5	6	8	.02	.04	Institutional Controls
		3	4				.02	.05	Post Design Support
	2	3	4	5			.02	.06	Procurement and Warehousing of Equipment and Material
	2	3	4	5			.02	.07	A/E Support
	2	3	4				.02	.08	Contractor Construction Management
	2	3	4				.02	.09	Government Construction Management
			4	5	6		.02	.10	Independent Contractor Verification of Cleanup or Reuse
1	2						.02	.11	Enforcement
1	2	3	4	5	6		.02	.12	Asset Recovery
1	2	3	4	5	6	8	.02	.13	Configuration Management
1	2	3	4	5	6		.02	.14	Project Safety and Health
1	2	3	4	5	6		.02	.15	Contract Closeout
1	2	3	4	5	6		.02	.16	Realty Services
1	2	3	4	5	6		.02	.17	Regulatory Agency Oversight Staff
1	2	3	4	5	6		.02	.18	Information Management
1	2	3	4	5	6		.02	.19	Litigation Support
1	2	3	4	5	6	8	.02	.9x	Other
1	**2**	**3**	**4**	**5**	**6**	**8**	**.03**	**.00**	**PREPARATION OF PLANS & SPECIFICATIONS**
1	2	3	4	5	6		.03	.01	Workplan
1	2	3	4	5	6		.03	.02	Chemical Data Acquisition Plan
1	2	3	4	5	6		.03	.03	Sampling and Analysis Plan
1	2	3	4	5		8	.03	.04	Health and Safety Plan
1	2	3	4	5	6		.03	.05	Pollution Control and Mitigation Plan
1	2	3	4	5			.03	.06	Data Management Plan
1	2	3	4	5	6		.03	.07	Community Relations Plan
1	2	3	4	5	6		.03	.08	Transportation and Disposal Plan (Waste Management Plan)
1	2	3	4	5		8	.03	.09	Management Plan
	2					8	.03	.10	Risk Assessment Plan
1	2	3					.03	.11	Technical Project Goals and Objectives
1	2	3	4	5			.03	.12	Implementation Plans
1	2	3	4				.03	.13	Emergency Response Plans/Report/Approval
1	2	3	4				.03	.14	Environmental Workplans
1	2	3					.03	.15	Decommissioning Plan
			4	5	6		.03	.16	Post RA/D&D Monitoring Plan
1	2	3	4	5	6		.03	.17	Combined Workplan
1	2	3					.03	.18	Proposed Plan
		3					.03	.19	RCRA Permit Preparation/Modification (see also X.02.03.05.01 and .02.03.06)
		3	4				.03	.20	Environmental Action Implementation Plan
1	2	3	4	5	6		.03	.21	Waste Site Work Permits
1	2	3	4	5	6	8	.03	.22	Corrective Action Plan Reporting
			4	5	6		.03	.23	Material Disposition Plan
1	2	3	4	5	6	8	.03	.9x	Other
1	**2**	**3**	**4**	**5**	**6**		**.04**	**.00**	**STUDIES/DESIGN AND DOCUMENTATION**
1	2						.04	.01	Hazardous, Toxic, and Radioactivity Ranking System (HRS)
1	2						.04	.02	Human Health Risk Assessment
1	2						.04	.03	Ecological Risk Assessment
1	2						.04	.04	Risk Assessment Documentation
1	2						.04	.05	Environmental Investigation Report

Ph1	Ph2	Ph3	Ph4	Ph5	Ph6	Ph8	Lvl	Lvl	
Assess.	Studies	Design	Cap. Const.	O&M	SLMT	Prog. Mgmt/ Infra.			ENVIRONMENTAL COST ELEMENT STRUCTURE
	2						.04	.06	Develop Environmental Alternatives
	2						.04	.07	Screen Environmental Alternatives
	2						.04	.08	Evaluate Alternatives
	2						.04	.09	Refinement of Alternatives
	2						.04	.10	Document FS (CMS)
		3	4				.04	.11	Environmental Management Project Design
		3	4				.04	.12	Decontamination/Dismantlement Project Designs
		3	4				.04	.13	Facility Design
		3	4				.04	.14	Value Engineering/Special Studies
1	2	3	4	5	6		.04	.15	Combined Report
	2	3					.04	.16	Engineering Evaluation/Cost Analysis
	2	3					.04	.17	Record of Decision
	2						.04	.18	Combined Feasibility Document
			4				.04	.19	Post-Construction Design Report
		3					.04	.20	Task Requirement and Criteria
		3	4				.04	.21	Submittals
1	2	3	4	5	6		.04	.9x	Other
1	**2**	**3**	**4**	**5**	**6**	**8**	**.05**	**.00**	**SITE WORK**
1	2	3	4	5	6		.05	.01	Mobilization
1	2	3	4	5	6		.05	.02	Cleanup/Landscaping/Revegetation
1	2	3	4				.05	.03	Clear and Grub
1	2	3	4	5			.05	.04	Dismantling and Demolition
1	2	3	4				.05	.05	Excavation and Earthwork
1	2	3	4	5			.05	.06	Load and Haul
1	2	3	4				.05	.07	Borrow Pit/Haul Roads
1	2	3	4	5	6		.05	.08	Access Roads
1	2	3	4	5	6		.05	.09	Arterial Roads/Divided Highways
			4	5	6		.05	.10	Diesel Generator
			4	5	6		.05	.11	Access Control Facility
1	2	3	4	5	6		.05	.12	Railroad Tracks and Crossing
1	2	3	4	5	6		.05	.13	Bridges
1	2	3	4	5	6		.05	.14	Fencing
1	2	3	4	5	6		.05	.15	Parking Lots
1	2	3	4	5	6		.05	.16	Retaining Wall
1	2	3	4	5	6		.05	.17	Sidewalks
1	2	3	4	5	6		.05	.18	Sprinkler System
1	2	3	4	5	6		.05	.19	Structures/Culverts
1	2	3	4	5	6		.05	.20	Gas Distribution
1	2	3	4	5	6		.05	.21	Fuel Line Distribution
1	2	3	4	5	6		.05	.22	Fuel Storage Tanks
1	2	3	4	5	6		.05	.23	Heating/Cooling Distribution System
1	2	3	4	5	6		.05	.24	Steam and Condensate Distribution
1	2	3	4	5	6		.05	.25	Treatment Plants/Lift Stations
1	2	3	4	5	6		.05	.26	Water Distribution
1	2	3	4	5	6		.05	.27	Water Storage Tanks
1	2	3	4	5	6		.05	.28	Storm Sewer
1	2	3	4	5	6		.05	.29	Communications
1	2	3	4	5	6		.05	.30	Lighting
1	2	3	4	5	6		.05	.31	Overhead Electrical Distribution
1	2	3	4	5	6		.05	.32	Underground Electrical Distribution
1	2	3	4	5	6		.05	.33	Sanitary Sewer
			4	5	6		.05	.34	Restoration of Buildings after D&D
1	2	3	4	5	6		.05	.35	Compressed Air/Nitrogen
1	2	3	4	5	6		.05	.36	Demobilization
1	2	3	4	5	6	8	.05	.37	Population Relocation
1	2	3	4	5	6		.05	.38	Relocation of Distribution Systems
			4	5	6		.05	.39	Diesel Generator
			4	5	6		.05	.40	Access Control Facility
			4	5	6		.05	.41	Steam Plant Facility
			4	5	6		.05	.42	Switch Gear Building
			4	5	6		.05	.43	Important to Safety Switch Gear Building
1	2	3	4	5	6		.05	.51	General Requirements
1	2	3	4	5	6		.05	.52	Clean Site Work
1	2	3	4	5	6		.05	.53	Concrete

Ph1	Ph2	Ph3	Ph4	Ph5	Ph6	Ph8	Lvl	Lvl	
Assess.	Studies	Design	Cap. Const.	O&M	SLMT	Prog. Mgmt/ Infra.			ENVIRONMENTAL COST ELEMENT STRUCTURE
1	2	3	4	5	6		.05	.54	Masonry
1	2	3	4	5	6		.05	.55	Metals
1	2	3	4	5	6		.05	.56	Wood & Plastics
1	2	3	4	5	6		.05	.57	Thermal and Moisture Protection
1	2	3	4	5	6		.05	.58	Doors and Windows
1	2	3	4	5	6		.05	.59	Finishes
1	2	3	4	5	6		.05	.60	Specialties
1	2	3	4	5	6		.05	.61	Equipment
1	2	3	4	5	6		.05	.62	Furnishings
1	2	3	4	5	6		.05	.63	Special Construction
1	2	3	4	5	6		.05	.64	Conveying Systems
1	2	3	4	5	6		.05	.65	Mechanical
1	2	3	4	5	6		.05	.66	Electrical
1	2	3	4	5	6	8	.05	.9x	Other
1	**2**	**3**	**4**	**5**	**6**	**8**	**.06**	**.00**	**SURVEILLANCE AND MAINTENANCE**
1	2	3	4	5	6	8	.06	.01	Facility Transition
1	2	3	4	5	6	8	.06	.02	Outdoor Surveillance and Maintenance
1	2	3	4	5	6	8	.06	.03	Indoor Surveillance and Maintenance
1	2	3	4	5	6	8	.06	.9x	Other
1	**2**	**3**	**4**	**5**	**6**		**.07**	**.00**	**INVESTIGATIONS AND MONITORING/SAMPLE COLLECTION**
1	2	3					.07	.01	Site Reconnaissance
1	2	3	4	5	6		.07	.02	Meteorological Monitoring
1	2	3	4	5	6		.07	.03	Site Contaminant Surveys/Radiation Monitoring
1	2	3	4	5	6		.07	.04	Hydrogeological Investigations - Groundwater
1	2	3	4	5	6		.07	.05	Hydrogeological Investigations - Surface Water
1	2	3	4	5	6		.07	.06	Geophysical/Geotechnical Investigation
1	2	3	4	5	6		.07	.07	Ecological Investigation
1	2	3	4	5	6		.07	.08	Air Monitoring and Sampling
1	2	3	4	5	6		.07	.09	Groundwater Sampling/Monitoring
1	2	3	4	5	6		.07	.10	Surface Water Sampling
1	2	3	4	5	6		.07	.11	Soil/Sediment Sampling
1	2	3	4	5	6		.07	.12	Ecological Sampling
1	2	3	4	5	6		.07	.13	Material/Waste Sampling
1	2	3	4	5	6		.07	.14	Contaminated Building Survey/Structures/Equipment Samples
1	2	3	4	5	6		.07	.15	Monitoring Well
1	2	3	4	5	6		.07	.16	Site-Specific Geographical Information System (GIS)
1	2	3	4	5	6		.07	.17	Historical/Cultural/Archeological Investigation
1	2	3	4	5	6		.07	.9x	Other
1	**2**	**3**	**4**	**5**	**6**		**.08**	**.00**	**SAMPLE ANALYSIS**
1	2	3	4	5	6		.08	.01	Air/Gas Sample Analysis
1	2	3	4	5	6		.08	.02	Groundwater Sample Analysis
1	2	3	4	5	6		.08	.03	Surface Water Sample Analysis
1	2	3	4	5	6		.08	.04	Soil/Sediment Sample Analysis
1	2	3	4	5	6		.08	.05	Gas Waste Sample Analysis
1	2	3	4	5	6		.08	.06	Liquid Material/Waste Sample Analysis
1	2	3	4	5	6		.08	.07	Solid Material/Waste Sample Analysis
1	2	3	4	5	6		.08	.08	Biota Sample Analysis
1	2	3	4	5	6		.08	.09	Bioassay Sample Analysis
1	2	3	4	5	6		.08	.10	Bioaccumulation Studies
1	2	3	4	5	6		.08	.11	Mobile - Air/Gas Sample Analysis
1	2	3	4	5	6		.08	.12	Mobile - Groundwater Sample Analysis
1	2	3	4	5	6		.08	.13	Mobile - Surface Water Sample Analysis
1	2	3	4	5	6		.08	.14	Mobile - Soil/Sediment Sample Analysis
1	2	3	4	5	6		.08	.15	Mobile - Gas Waste Sample Analysis
1	2	3	4	5	6		.08	.16	Mobile - Liquid Waste Sample Analysis
1	2	3	4	5	6		.08	.17	Mobile - Solid Waste Sample Analysis
1	2	3	4	5	6		.08	.18	Mobile - Biota Sample Analysis
1	2	3	4	5	6		.08	.19	Real Time - Air/Gas Sample Analysis
1	2	3	4	5	6		.08	.20	Real Time - Groundwater Sample Analysis
1	2	3	4	5	6		.08	.21	Real Time - Surface Water Sample Analysis
1	2	3	4	5	6		.08	.22	Real Time - Soil/Sediment Sample Analysis
1	2	3	4	5	6		.08	.23	Real Time - Gas Waste Sample Analysis
1	2	3	4	5	6		.08	.24	Real Time - Liquid Waste Sample Analysis

Ph1	Ph2	Ph3	Ph4	Ph5	Ph6	Ph8	Lvl	Lvl	
Assess.	Studies	Design	Cap. Const.	O&M	SLMT	Prog. Mgmt/ Infra.			ENVIRONMENTAL COST ELEMENT STRUCTURE
1	2	3	4	5	6		.08	.25	Real Time - Solid Waste Sample Analysis
1	2	3	4	5	6		.08	.9x	Other
1	**2**	**3**	**4**	**5**	**6**		**.09**	**.00**	**SAMPLE MANAGEMENT/DATA VALIDATION/DATA EVALUATION**
1	2	3	4	5	6		.09	.01	Prepare and Ship Environmental Samples
1	2	3	4	5	6		.09	.02	Coordinate with Sample MGT Personnel/Regulators
1	2	3	4	5	6		.09	.03	Implement EPA-Approved Laboratory QA Program
1	2	3	4	5	6		.09	.04	Provide Sample Management
1	2	3	4	5	6		.09	.05	Derived Waste Disposal (Gas, Liquid, Solid)
1	2	3	4	5	6		.09	.06	Perform Data Validation
1	2	3	4	5	6		.09	.07	Data Usability Evaluation/Field QA/QC
1	2	3	4	5	6		.09	.08	Data Reduction, Tabulation and Evaluation/Analysis
1	2	3	4	5	6		.09	.09	Modeling
1	2	3	4	5	6		.09	.10	Document Data Evaluation
1	2	3	4	5	6		.09	.11	Combined Sample Management
1	2	3	4	5	6		.09	.12	Combined Data Management
			4	5			.09	.13	Data Review for Effectiveness
1	2	3	4	5	6		.09	.9x	Other
	2	**3**					**.10**	**.00**	**TREATABILITY/RESEARCH AND DEVELOPMENT**
	2	3					.10	.01	Literature Search
	2	3					.10	.02	Data Collection
	2	3					.10	.03	Develop Treatability Workplan
	2	3					.10	.04	Design/Procure New Tools and Equipment
	2	3					.10	.05	Bench Test
	2	3					.10	.06	Pilot-Scale Test
	2	3					.10	.07	Field Test
	2	3					.10	.08	Test Special Tools/Equipment
	2	3					.10	.09	Design, Procure, Test New Procedures/Specifications
	2	3					.10	.10	Simulation/Modeling
	2	3					.10	.11	Document Treatability Study
	2	3					.10	.12	Status Review
	2	3					.10	.13	Technology Transfer
	2	3					.10	.14	Product Qualification, Characterization, and Certification
	2	3					.10	.9x	Other
			4	**5**			**.11**	**.00**	**TREATMENT PLANT/FACILITY/PROCESS**
			4	5			.11	.01	Covered Treatment Train Technologies Unit
			4	5			.11	.02	Sheds & Other Supporting Facilities
			4	5			.11	.03	Simple Treatment Facilities (e.g., Equipment Slabs, Foundation, Utilities)
			4	5			.11	.04	Treatment Train Facility (e.g., Rain Covers, Foundation, Utilities)
			4	5			.11	.05	Full-Scale Environmental Management Plant/Facility
			4	5			.11	.06	Environmental Management Low/Moderate Hazard Treatment Front-End
			4	5			.11	.07	Environmental Management High Hazard/Remote Treatment Front-End
			4	5			.11	.08	Environmental Management Low Hazard Functional Area (e.g., Hazardous/Toxic)
			4	5			.11	.09	Environmental Management Moderate Hazard Functional Area (e.g., Hazardous/Toxic, LLW & MLLW)
			4	5			.11	.10	Environmental Management High Hazard Functional Area (e.g., ALLW, MALLW, TRU, Spent Fuel, & CWM)
			4	5			.11	.11	Environmental Management Remote Functional Area (e.g., ALLW, MALLW, TRU, Spent Fuel, & CWM)
			4	5			.11	.12	Waste Treatment Fees and Taxes
			4				.11	.13	Facility Commissioning Activities
			4	5			.11	.9x	Other
			4	**5**	**6**		**.12**	**.00**	**STORAGE FACILITY**
							.12	.01	Reserved for Future Use
			4	5	6		.12	.02	Conventional Storage/Warehouses
			4	5	6		.12	.03	Storage Facility Front-End - Low/Moderate Hazard
			4	5	6		.12	.04	Storage Facility Front-End - High/Remote Hazard
			4	5	6		.12	.05	Contact Handled Storage
			4	5	6		.12	.06	Remote Handled Storage
			4	5	6		.12	.07	Mixed Waste Storage
			4	5			.12	.08	Facilities and Sheds for Temporary Storage
			4	5	6		.12	.09	Waste Storage Fees and Taxes
			4	5	6		.12	.9x	Other
			4	**5**	**6**		**.13**	**.00**	**DISPOSAL FACILITY/PROCESS**

Ph1	Ph2	Ph3	Ph4	Ph5	Ph6	Ph8	Lvl	Lvl	
Assess.	Studies	Design	Cap. Const.	O&M	SLMT	Prog. Mgmt/ Infra.			ENVIRONMENTAL COST ELEMENT STRUCTURE
							.13	.01	Reserved for Future Use
			4	5	6		.13	.02	Disposal Facility Front-End - Low/Moderate Hazard
			4	5	6		.13	.03	Disposal Facility Front-End - High/Remote Hazard
			4	5	6		.13	.04	Landfill
			4	5	6		.13	.05	Aboveground Vault
			4	5	6		.13	.06	Underground Vault
			4	5	6		.13	.07	Underground Mine/Shaft
			4	5	6		.13	.08	Tanks
			4	5	6		.13	.09	Pads (Tumulus/Retrievable Storage/Other)
			4	5	6		.13	.10	Confined Disposal Facilities (CDFs)
			4	5	6		.13	.11	Engineered Disposal
			4	5	6		.13	.12	Intermediate Depth Disposal (Burial Ground/Trench/Pits)
			4	5	6		.13	.13	Geologic Disposal
			4	5	6		.13	.14	Shallow Land Disposal
			4	5	6		.13	.15	Deep Well Injection
			4	5	6		.13	.16	Silo Disposal
			4	5	6		.13	.17	Bore - Hole Disposal
			4	5	6		.13	.18	Disposal Fees and Taxes
			4	5	6		.13	.9x	Other
			4				**.14**	**.00**	**ORDNANCE & EXPLOSIVES (OE) REMOVAL & DESTRUCTION (CWM is inX.11 & X.21-X.31, & X.34)**
			4				.14	.01	Demolition for OE Removal
			4				.14	.02	Brush Clearing with OE
			4				.14	.03	Blast Mats
			4				.14	.04	Blast Shields
			4				.14	.05	Surface Sweep (Visual)
			4				.14	.06	Surface Sweep (Magnetometer)
			4				.14	.07	Surface Sweep (Mag & Flag)
			4				.14	.08	Excavate by Hand 0' - 2' Depth
			4				.14	.09	Excavate with Heavy Equipment > 2' Depth
			4				.14	.10	Sifting
			4				.14	.11	Removal of Chemical Warfare Material (CWM)
			4				.14	.12	OE On-Site Destruction
			4				.14	.13	Bunkers (Temporary)
			4				.14	.9x	Other (Use Numbers 90-99)
			4		**6**		**.15**	**.00**	**DRUMS/TANKS/STRUCTURES/MISCELLANEOUS REMOVAL/ABATEMENT**
			4				.15	.01	Drum Removal
			4				.15	.02	Tank Removal
			4				.15	.03	Structure Removal
			4				.15	.04	Asbestos Abatement
			4				.15	.05	Piping & Pipeline Removal
			4		6		.15	.06	Well Abandonment
			4		6		.15	.9x	Other
			4	**5**	**6**		**.16**	**.00**	**AIR POLLUTION/GAS COLLECTION AND CONTROL**
			4	5	6		.16	.01	Gas/Vapor Collection Trench System
			4	5	6		.16	.02	Gas/Vapor Collection Well System
			4	5	6		.16	.03	Gas/Vapor Collection at Lagoon Cover
			4	5	6		.16	.04	Fugitive Dust/Vapor/Gas Emission Control
			4	5	6		.16	.9x	Other
			4	**5**	**6**		**.17**	**.00**	**SURFACE WATER/SEDIMENTS CONTAINMENT, COLLECTION, AND CONTROL**
			4	5	6		.17	.01	Dredging/Excavating
			4	5	6		.17	.02	Berms
			4	5	6		.17	.03	Floodwalls
			4	5	6		.17	.04	Levees/Dams/Dike
			4	5	6		.17	.05	Terraces and Benches
			4	5	6		.17	.06	Channels/Waterways/Ditches
			4	5	6		.17	.07	Chutes or Flumes
			4	5	6		.17	.08	Sediments Barriers
			4	5	6		.17	.09	Storm Drainage (See X.05.28 for Storm Sewers)
			4	5	6		.17	.10	Lagoons/Basins/Tanks
			4	5	6		.17	.11	Pumping/Draining/Collection
			4	5	6		.17	.12	Erosion Control

Ph1 Assess.	Ph2 Studies	Ph3 Design	Ph4 Cap. Const.	Ph5 O&M	Ph6 SLMT	Ph8 Prog. Mgmt/ Infra.	Lvl	Lvl	ENVIRONMENTAL COST ELEMENT STRUCTURE
			4	5	6		.17	.13	Aquatic Barrier
			4	5	6		.17	.14	Sediment Capping
			4	5	6		.17	.9x	Other
			4	**5**	**6**		**.18**	**.00**	**GROUNDWATER CONTAINMENT, COLLECTION, OR CONTROL**
			4	5	6		.18	.01	Extraction Wells
			4	5	6		.18	.02	Injection Wells
			4	5	6		.18	.03	Subsurface Drainage/Collection/French Drain
			4	5	6		.18	.04	Slurry Walls
			4	5	6		.18	.05	Grout Curtain
			4				.18	.06	Sheet Piling
			4				.18	.9x	Other
			4	**5**	**6**		**.19**	**.00**	**SOLIDS/SOILS CONTAINMENT (e.g., Capping) COLLECTION, OR CONTROL**
			4	5			.19	.01	Contaminated Soil Collection (Excavation)
			4	5			.19	.02	Waste Containment, Portable (Furnish/Fill)
			4	5	6		.19	.03	Upper Vegetative (Topsoil) Layer
			4	5	6		.19	.04	RCRA C Cap
			4	5	6		.19	.05	RCRA D Cap
			4	5	6		.19	.06	Asphalt/Concrete Layer
			4	5	6		.19	.07	Landfill Cap Enhancements
			4	5	6		.19	.08	Engineered Barrier
			4	5	6		.19	.9x	Other
			4	**5**			**.20**	**.00**	**LIQUID WASTE/SLUDGE (e.g., UST/AST) CONTAINMENT, COLLECTION, OR CONTROL**
			4	5			.20	.01	Industrial Vacuuming
			4	5			.20	.02	Radioactive Specific Waste Containment
			4	5			.20	.03	Pumping/Draining/Collection
			4	5			.20	.9x	Other
			4	**5**			**.21**	**.00**	**IN SITU BIOLOGICAL TREATMENT**
			4	5			.21	.01	Biological Barriers
							.21	.02	Reserved for Future Use
			4	5			.21	.03	Bioventing
			4	5			.21	.04	Cometabolic Treatment
			4	5			.21	.05	Constructed Wetlands
			4	5			.21	.06	Enhanced Bioremediation
			4	5			.21	.07	Land Treatment
			4		6		.21	.08	Natural attenuation
			4	5			.21	.09	Phytoremediation
			4	5			.21	.10	Baroball
			4	5			.21	.9x	Other
			4	**5**			**.22**	**.00**	**EX SITU BIOLOGICAL TREATMENT**
			4	5			.22	.01	Activated Sludge
			4	5			.22	.02	Reserved for Future Use
			4	5			.22	.03	Biopile (Bioheap, Biomound)
			4	5			.22	.04	Cometabolic Treatment
			4	5			.22	.05	Genetically Engineered Organism
			4	5			.22	.06	Land Farming
			4	5			.22	.07	Rotating Biological Contactors
			4	5			.22	.08	Slurry Phase Biological Treatment
			4	5			.22	.09	Trickling Filter
			4	5			.22	.10	Biological Lagoons
			4	5			.22	.11	Anaerobic Sludge Digestion
			4	5			.22	.12	Composting
			4	5			.22	.13	Fungal Biodegredation (White Rot Fungus)
			4	5			.22	.9x	Other
			4	**5**			**.23**	**.00**	**IN SITU CHEMICAL TREATMENT**
			4	5			.23	.01	Reserved for Future Use
			4	5			.23	.02	Oxygen Release Compounds
			4	5			.23	.03	Neutralization
			4	5			.23	.04	Oxidation / Reduction
			4	5			.23	.05	Soil Flushing (Surfactant / Solvent)
			4	5			.23	.9x	Other
			4	**5**			**.24**	**.00**	**EX SITU CHEMICAL TREATMENT**

Ph1 Assess.	Ph2 Studies	Ph3 Design	Ph4 Cap. Const.	Ph5 O&M	Ph6 SLMT	Ph8 Prog. Mgmt/ Infra.	Lvl	Lvl	ENVIRONMENTAL COST ELEMENT STRUCTURE
			4	5			.24	.01	Glycolate/ Alkali Metal/Polyethylene Glycol (A/PEG)
			4	5			.24	.02	Base-Catalyzed Decomposition Process
			4	5			.24	.03	Chemical Hydrolysis
			4	5			.24	.04	Chlorination
			4	5			.24	.05	Dehalogenation
			4	5			.24	.06	Hydrogen reduction
			4	5			.24	.07	Ion Exchange
			4	5			.24	.08	Chemical Oxidation / Reduction
			4	5			.24	.09	Oxygen Release Compounds
			4	5			.24	.10	Ozonation
			4	5			.24	.11	Solvent Extraction
			4	5			.24	.12	Neutralization
			4	5			.24	.13	Ultraviolet (UV) Photolysis
			4	5			.24	.14	Ultraviolet (UV) Oxidation
			4	5			.24	.15	Coagulation / Flocculation / Precipitation
			4	5			.24	.16	Activated Alumina (Adsorption/Absorption)
			4	5			.24	.17	Forager Sponge (Adsorption/Absorption)
			4	5			.24	.18	Chemical Extraction (Solvent/Acid/Alkaline Extraction)
			4	5			.24	.9x	Other
			4	**5**	**6**		**.25**	**.00**	**IN SITU PHYSICAL TREATMENT**
			4	5			.25	.01	In-Well Air Stripping/Circulating Wells
			4	5			.25	.02	Air Sparging
							.25	.03	Reserved for Future Use
			4	5			.25	.04	Cryogenics (Frozen Soil Barrier)
			4	5			.25	.05	Fracturing (Hydrofracturing)
			4	5			.25	.06	Lasagna Process
			4	5			.25	.07	Laser (Cutting)
			4	5			.25	.08	Laser (Surface Decontamination)
			4	5			.25	.09	Passive/Reactive Treatment Wall
			4	5			.25	.10	Skimming
			4	5			.25	.11	Soil Flushing (Surfactant / Solvent)
			4	5			.25	.12	Solids Dewatering/Drying
							.25	.13	Reserved for Future Use
			4	5			.25	.14	Vacuum Blasting
			4	5	6		.25	.15	Coating
			4	5			.25	.16	Electrokinetics
			4	5			.25	.17	Soil Vapor Extraction
			4	5			.25	.18	Fracturing (Pneumatic)
			4	5			.25	.19	Blast Enhanced Fracturing
			4				.25	.20	Directional Wells (Enhancement)
			4	5			.25	.21	Bioslurping
			4	5			.25	.22	Dual Phase Extraction (Multi-Phase)
			4	5			.25	.23	Draw-Down Pumping
			4	5	6		.25	.9x	Other
			4	**5**			**.26**	**.00**	**EX SITU PHYSICAL TREATMENT**
			4	5			.26	.01	Aeration
			4	5			.26	.02	Advanced Electrical Reactor
			4	5			.26	.03	Agglomeration
			4	5			.26	.04	Air Stripping
			4	5			.26	.05	Chelation
							.26	.06	Reserved for Future Use
			4	5			.26	.07	Compaction/Volume Reduction
							.26	.08	Reserved for Future Use
			4	5			.26	.09	Decant/Phase Separation
			4	5			.26	.10	Dissolved Air Floatation
			4	5			.26	.11	Distillation
			4	5			.26	.12	E-Beam
			4	5			.26	.13	Electrochemical Oxidation
							.26	.14	Reserved for Future Use
			4	5			.26	.15	Electrolysis
			4	5			.26	.16	Equalization
			4	5			.26	.17	Evaporation
			4	5			.26	.18	Soil Vapor Extraction

Ph1 Assess.	Ph2 Studies	Ph3 Design	Ph4 Cap. Const.	Ph5 O&M	Ph6 SLMT	Ph8 Prog. Mgmt/ Infra.	Lvl	Lvl	ENVIRONMENTAL COST ELEMENT STRUCTURE
			4	5			.26	.19	Filter Presses
			4	5			.26	.20	Media Filtration
			4	5			.26	.21	Freeze Crystallization
							.26	.22	Reserved for Future Use
			4	5			.26	.23	Granular Activated Carbon Adsorption- Liquid
			4	5			.26	.24	Heavy Media Separation
			4	5			.26	.25	High Pressure Aqueous Destruction
			4	5			.26	.26	Lignin Adsorption / Sorptive Clays
			4	5			.26	.27	Magnetic Separation
			4	5			.26	.28	Membrane Separation-Electrodialysis
			4	5			.26	.29	Reverse Osmosis
			4	5			.26	.30	Oil / Water Separation
			4	5			.26	.31	Sedimentation
			4	5			.26	.32	Shredding
			4	5			.26	.33	Sieving (Size Separation, Screening, Physical Separation)
			4	5			.26	.34	Skimming
			4	5			.26	.35	Soil Washing (Surfactant / Solvent)
			4	5			.26	.36	Solids Dewatering/Drying
			4	5			.26	.37	Sprinkler Irrigation
			4	5			.26	.38	Supercritical Extraction
			4	5			.26	.39	Surfactant Enhanced Recovery
			4	5			.26	.40	Synthetic Resin Adsorption
			4	5			.26	.41	Gravity Separation
			4	5			.26	.42	Cryogenics
			4	5			.26	.43	Nanofiltration
			4	5			.26	.44	Ultrafiltration/Microfiltration
			4	5			.26	.45	Membrane Pervaporation
			4	5			.26	.9x	Other
			4	**5**			**.27**	**.00**	**IN SITU THERMAL TREATMENT**
			4	5			.27	.01	Thermal Blanket (with Vacuum Extraction)
			4	5			.27	.02	Six-Phase Heating and Extraction
							.27	.03	Reserved for Future Use
			4	5			.27	.04	Steam/Hot Water Injection Vacuum Extraction
			4	5			.27	.05	High Temperature Thermal Desorption
							.27	.06	Reserved for Future Use
			4	5			.27	.07	Low Temperature Thermal Desorption
			4	5			.27	.08	Radiofrequency/Electromagnetic Heating
			4	5			.27	.9x	Other
			4	**5**			**.28**	**.00**	**EX SITU THERMAL TREATMENT**
			4	5			.28	.01	High Temperature Thermal Desorption
			4	5			.28	.02	Incineration
			4	5			.28	.03	Low Temperature Thermal Desorption
			4	5			.28	.04	Molten Salt Oxidation
			4	5			.28	.05	Open Burn/Open Detonation
			4	5			.28	.06	Plasma
			4	5			.28	.07	Pyrolysis
							.28	.08	Reserved for Future Use
			4	5			.28	.09	Retort/Amalgamation
			4	5			.28	.10	Solar Detoxification/Evaporation
			4	5			.28	.11	Steam Stripping/Flushing/Reforming
			4	5			.28	.12	Supercritical Water Oxidation
			4	5			.28	.13	Thermally Enhanced Vapor Extraction
			4	5			.28	.14	Molten Metal
			4	5			.28	.15	Hot Gas Decontamination
			4	5			.28	.9x	Other
			4	**5**			**.29**	**.00**	**IN SITU STABILIZATION/FIXATION/ENCAPSULATION**
			4	5			.29	.01	Asphalt-Based Encapsulation
			4	5			.29	.02	Grout Injection
			4	5			.29	.03	Pozzolan Process
			4	5			.29	.04	In Situ Vitrification
			4	5			.29	.05	In Situ Pipe Grouting
			4	5			.29	.9x	Other
			4	**5**			**.30**	**.00**	**EX SITU STABILIZATION/FIXATION/ENCAPSULATION**

Ph1	Ph2	Ph3	Ph4	Ph5	Ph6	Ph8	Lvl	Lvl	
Assess.	Studies	Design	Cap. Const.	O&M	SLMT	Prog. Mgmt/ Infra.			ENVIRONMENTAL COST ELEMENT STRUCTURE
			4	5			.30	.01	Asphalt-Base Encapsulation
			4	5			.30	.02	Calcination
			4	5			.30	.03	Polymer Based Encapsulation
			4	5			.30	.04	Pozzolan Process (Lime/Portland Cement)
							.30	.05	Reserved for Future Use
			4	5			.30	.06	Sludge Stabilization (Aggregate / Rock / Slag)
			4	5			.30	.07	Vitrification/Molten Glass
			4	5			.30	.08	Modified Sulfur Cement
			4	5			.30	.09	Polyethylene Extrusion
			4	5			.30	.10	Emulsified Asphalt
			4	5			.30	.9x	Other
			4	**5**			**.31**	**.00**	**FACILITY DECOMMISSIONING AND DISMANTLEMENT**
			4	5			.31	.01	Nuclear Facility Shutdown and Inspection
			4	5			.31	.02	Deactivation
			4	5			.31	.03	Preparation for Dormancy
			4	5			.31	.04	Hot Cell Equipment Modification
			4	5			.31	.05	Site Reconfiguration, Isolating and Securing Structure
			4	5			.31	.06	Removal of Fuel Handling Equipment
			4	5			.31	.07	Radiological Inventory Categorization for D&D
			4	5			.31	.08	Preparation and Decontamination for Area and Equipment
			4	5			.31	.09	Dismantling and Removal of Contaminated Equipment /Material
			4	5			.31	.10	Dismantling Operations on Reactor Vessel & Internals
			4	5			.31	.11	Dismantling and Removal of Primary and Auxiliary Systems
			4	5			.31	.12	Dismantling and Removal of Biological and Thermal Shield
			4	5			.31	.13	Removal of Pool Linings
			4	5			.31	.14	Dismantling of In-Cell Equipment
			4	5			.31	.15	Removal of Other Material and Equipment from Containment Structure
			4	5			.31	.16	Facility (Controlled Area) Hardening, Isolation or Entombment
			4	5			.31	.17	Removal of All Other Facilities, or Entire Contaminated Facility
			4	5			.31	.18	Dismantling of Temporary Fuel Storage Facility
			4	5			.31	.19	Dismantling of Intermediate Fuel Storage Facility
			4				.31	.20	Reprocessing Costs
			4	5			.31	.21	Dismantling or Demolition of Other Facilities
			4	5			.31	.9x	Other
1	**2**	**3**	**4**	**5**			**.32**	**.00**	**MATERIAL HANDLING/TRANSPORTATION**
1	2	3	4	5			.32	.01	Waste Stream Handling/Packaging
1	2	3	4	5			.32	.02	Transportation Device/Equipment
1	2	3	4	5			.32	.03	OE Off-Site Destruction Transportation to DOD Facility
1	2	3	4	5			.32	.04	Reserved for Future Use
1	2	3	4	5			.32	.05	Reserved for Future Use
1	2	3	4	5			.32	.06	Reserved for Future Use
1	2	3	4	5			.32	.07	Reserved for Future Use
1	2	3	4	5			.32	.08	Reserved for Future Use
1	2	3	4	5			.32	.09	Reserved for Future Use
1	2	3	4	5			.32	.10	Certification & Shipping
1	2	3	4	5			.32	.11	Transportation by truck
1	2	3	4	5			.32	.12	Transportation by rail
1	2	3	4	5			.32	.13	Transportation by barge
1	2	3	4	5			.32	.14	Transportation by air
1	2	3	4	5			.32	.15	Container Handling
1	2	3	4	5			.32	.9x	Other
1	**2**	**3**	**4**	**5**			**.33**	**.00**	**DISPOSAL**
							.33	.01	Reserved for Future Use
							.33	.02	Reserved for Future Use
							.33	.03	Reserved for Future Use
1	2	3	4	5	6		.33	.04	On-site DOE Disposal Costs, Fees, and Taxes
1	2	3	4	5	6		.33	.05	On-site Commercial Disposal Costs, Fees, and Taxes
1	2	3	4	5	6		.33	.06	Off-site DOE Disposal Costs, Fees, and Taxes
1	2	3	4	5	6		.33	.07	Off-Site Other Government Disposal Costs, Fees, and Taxes
1	2	3	4	5	6		.33	.08	Off-Site Commercial Disposal Costs, Fees, and Taxes
			4	5			.33	.09	Discharge to POTW
1	2	3	4	5	6		.33	.9x	Other
			4	**5**			**.34**	**.00**	**AIR EMISSION AND OFF-GAS TREATMENT**

Ph1	Ph2	Ph3	Ph4	Ph5	Ph6	Ph8	Lvl	Lvl	
Assess.	Studies	Design	Cap. Const.	O&M	SLMT	Prog. Mgmt/ Infra.			ENVIRONMENTAL COST ELEMENT STRUCTURE
			4	5			.34	.01	Biofiltration
			4	5			.34	.02	High Energy Corona
			4	5			.34	.03	Turnable Hybrid Plasma Reactor
			4	5			.34	.04	Membrane Separation
			4	5			.34	.05	Catalytic Oxidation
			4	5			.34	.06	Thermal/Oxidation
			4	5			.34	.07	Ultraviolet Oxidation
			4	5			.34	.08	VOC Recovery and Recycle
			4	5			.34	.09	Internal Combustion Engine
			4	5			.34	.10	Granular Activated Carbon Adsorption Gas/Vapor
			4	5			.34	.11	Alkali Bed Reactor
			4	5			.34	.12	Flameless Thermal Oxidation
			4	5			.34	.13	Condensation
			4	5			.34	.14	Flaring
			4	5	6		.34	.15	Synthetic Resin Adsorption
			4	5			.34	.9x	Other
1	2	3	4	5	6	8	.9x		OTHER (Use Numbers 90-99)